



**Office of Water Quality
NPDES Industrial Permits Section
Application For Approval to Use Water Treatment Additives**

All dischargers are required to disclose information on the water treatment additives in use and to demonstrate that such additives will not be harmful to aquatic life.

To assure that all discharges from treatment systems using water treatment chemicals meet Indiana Water Quality Standards, the following information must be submitted to the IDEM, Office of Water Quality, Industrial NPDES Permits Section when applying for a new or renewal NPDES permit or permit modification. During the preparation of the NPDES permit or modification this information may be used to establish permit limitations which comply with all Indiana Water Quality Standards. Additionally, if a permittee changes water treatment additives during the term of their NPDES permit, the following information must be submitted to the Industrial NPDES Permits Section, and approval of the change must be received prior to use of the new product(s). The information required by this form must be submitted for each additive submitted for review. It should also be noted that biomonitoring of the effluent for the affected outfall(s) may be required. Please include the following information for each additive.

1. The name of the water treatment additive (the trade name and company may suffice, initially). Is this a new additive or does it replace a previously approved one?
2. If more than one outfall is covered by this permit, which outfall does the use of this water treatment additive affect?
3. What is the feed or dosage rate in grams per 24 hr. period. (This may be provided in fluid ounces)
4. What is(are) the concentration(s) (mg/l) of the water treatment additive used in the treatment system and in the final discharge? Please explain how the final discharge concentration was determined. Include the location where the additive is put into use and the duration of use (hours per day and days per year).
5. Provide a description and method used to control the use of the water treatment additive. What are the procedures on how to maintain this concentration within the system?
6. What is the hardness of the discharge water?
7. The chemical composition of the water treatment additive (proprietary information may be submitted separately by the manufacturer or distributor and will be kept confidential). Additionally, name any ingredient that may be present and may cause toxicity at the proposed outfall. If known, the discharge concentration of the ingredient (mg/l).
8. What is the Blowdown Rate (MGD) from the treatment system using the water treatment additive?
9. What is the average flow (MGD) of all waste streams being discharged through the affected outfall?

10. What is the temperature of the treatment system using the water treatment additive?

11. What is the pH of the treatment system using the water treatment additive?

For determining safe concentrations of the water treatment additives, the following information should also be submitted or addressed. Submit the supporting documentation (i.e., Material Safety Data Sheets).

1. What is the toxicity (LC50) of the additive as determined by 96-hour flow through bioassays for fish (preferably fathead minnow (*Pimephales promelas*) or bluegill (*Lepomis macrochirus*) for warmwater species or rainbow trout (*Salmo gairdneri*) for coldwater species) and a 48-hour static renewal for invertebrates (preferably of the genera *Daphnia* or *Ceriodaphnia*)?

The testing procedures to determine LC50 values should follow U.S. EPA Guidelines. Static bioassays are acceptable only if the treatment chemical is persistent. The test species selected should be characteristic of the more sensitive representative aquatic species in the receiving stream. The test temperature should be maintained at 20 degrees Celsius (68 degrees Fahrenheit) for coldwater species and at 30 degrees Celsius (86 degrees Fahrenheit) for warmwater species (higher test temperatures are chosen in order to simulate worst case conditions)*.

2. What is the relationship of toxicity to pH?
3. What is the relationship of toxicity to water hardness?
4. What is the product persistence in the environment, N Octanol-Water Partition Coefficient, and Bioconcentration Factor (BCF), if available?
5. Provide the decay rate of the product, if known. This should be stated at a pH level within ½ pH standard unit within handling system. The half life is the time required for the initial product to degrade to half of its original concentration. (Please provide copies of the sources of this data.)
6. Include any additional information/documentation to help in evaluating the use of this water treatment additive. (Please attach additional pages to this application, if necessary.)

This information will be reviewed and permission to use the water treatment additive may be granted either by letter, permit limitations, or permit modification if the discharger has supplied the requested product information and toxicity data that will enable IDEM to establish permissible concentrations in each individual case. If the initial information is not sufficient to allow for the establishment of a safe concentration, additional information will be requested.

Proprietary information regarding the chemical composition of any water treatment additive will be kept confidential in accordance with the terms of 327 IAC 12-1. Claims of confidentiality must be made at the time of submittal; the information must be properly marked, segregated and secured at the time of submittal; and the person or company requesting confidentiality must provide justification as to why the information meets the criteria for it to be maintained as a trade secret, privileged information or confidential in accordance with 327 IAC 12-1.

*Note: Lower test temperatures may be used only if the thermal tolerance of the chosen representative aquatic species is below the recommended test temperatures.

This application should include the following and must be signed by a person in responsible charge to be valid. This signature attests to the following:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(Printed Name)

(Title)

(Signature)

(Date Signed)